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EXAMINER	
ZHAO, DAQUAN	
ART UNIT	**PAPER NUMBER**
2621	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/729,107	TSUMAGARI ET AL.	
	Examiner	Art Unit	
	DAQUAN ZHAO	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,7 and 14-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7, 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/729,107 have been fully considered but they are not persuasive.

2. Applicant argues, on page 7 of the remark, the combination of Yamamoto et al and Koz fails to teach "a storage unit configured to store the expansion information acquired by the second acquisition unit in accordance with a type of the expansion information".

The examiner has already explain in the last office action that the “video, audio and the sub-picture" are considered to be different "type of the expansion information" as claimed because the video, audio and sub-picture data are encoded or compressed according to the MPEP format and stored into the DVD (see column 5, line 64), and the video, audio and sub-picture data are decoded or decompressed or expanded in the process of reproduction as shown in figure 10 by the video decoder, audio decoder and the sub-picture decoded, respectively. It meets the claimed limitation of "acquired by the second acquisition unit in accordance with a type of expansion information" because after the data is read from the DVD and sent to the de-multiplexer 87 in figure 10, the video data has to be stored in the video buffer, the audio data has to be stored in the audio buffer and the sub-picture data has to be stored in the sub-picture buffer.

Applicant argues, on page 8 of the remark, the combination of "Yamamoto et al and Koz fail to teach “any technique of varying a storing method according to a data type for synchronous playback”. However, the claim has never called for this limitation.

Applicant also argues, on page 8 of the remark, "the office action does not explain how or why a FIFO video buffer as taught by Koz would be used as the audio buffer in Yamamoto et al". The Koz reference is there to teach it is obvious to one ordinary skill in the art at the time the invention was made to have "segmented memory spaces" in the buffer of figure 10 of Yamamoto et al, which includes video, audio and sub-picture as the limitation of "a storage unit configured to store the expansion information acquired by the second acquisition unit in accordance with a type of the expansion information" has been taught by Yamamoto et al as explain above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 7, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 7,194,196 B2) and Koz (US 5,990,955).

Regarding claim 1, Yamamoto et al teach an information playback apparatus comprising:

- a first acquisition unit configured to acquire contents from an information storage medium (e.g. figure 10, demultiplexer 86, which

corresponds to the first acquisition unit, obtains video data,SV, from the DVD1 and sends it to the video buffer 87, column 18, lines 57-65);

- a second acquisition unit configured to acquire expansion information from **at least one of** the information storage medium and an external apparatus via a communication line (e.g. figure 10, demultiplexer 86, which also corresponds to a second acquisition unit, obtains audio data, Sad, from the DVD1 and sends it to the audio buffer 92, column 19, lines 19-34);
- a storage unit configured to store the expansion information acquired by the second acquisition unit in accordance with a type of information (e.g. the audio buffer 92 corresponds to the storage unit and the "type information" corresponds to video, audio, and subpicture data, wherein these three type of data are separated by the demultiplexer 86 and stored in the video buffer 87, audio buffer 92 and subpicture buffer 89 accordingly); and
- a control unit configured to control input of the expansion information to the storage unit and output of the expansion information from the storage unit (e.g. column 18, line 33- column 19, line 34, system controller 100 controls the input and output of the VBV Buffer 87, Sub picture buffer 89 and audio buffer 92); and

- a playback unit configured to play back the contents acquired by the first acquisition unit, and to play back the expansion information stored in the storage unit in synchronism with playback of the contents (e.g. column 19, lines 19-34, the video and audio data are synchronized and figure 10 is a DVD player as mentioned in column 17, line 40).
- a first type of expansion information on the basis of input control by the control unit when the first type of expansion information is to be stored, the first type of expansion information stored in the storage unit being output on the basis of output control by the control unit (e.g. column 18, line 33- column 19, line 34, system controller 100 controls the input and output of the VBV Buffer 87, Sub picture buffer 89 and audio buffer 92);
- a second type of expansion information on the basis of input control by the control unit when the second type of expansion information is to be stored, the second type of expansion information stored in the storage unit being output on the basis of output control by the control unit (e.g. column 18, line 33- column 19, line 34, system controller 100 controls the input and output of the VBV Buffer 87, Sub picture buffer 89 and audio buffer 92);

- the content contain predetermined playback information assigned with time information (e.g. column 5, lines 41-59, and figures 1, system clock reference).
- the expansion information contains at least one segmented expansion information (e.g. column 5, lines 41-59, and figures 1, each pack has a header and data).
- one segmented expansion information contains header information and main body expansion information (e.g. column 5, lines 41-59, and figures 1, each pack has a header and data).
- header information contains time information (e.g. column 5, lines 41-59, and figures 1, system clock reference).
- playing back the predetermined main body expansion information on the basis of the time information contained in the header information (e.g. column 5, lines 41-59, and figures 1, system clock reference).

However, Yamamoto et al fail to teach each of segmented memory spaces of the storage unit stores a plurality of pieces of segmented expansion information which form a first type of expansion information when the first type of expansion information is to be stored, and the segmented memory spaces of the storage unit are integrated to store and output a second type of expansion information when the second type of expansion information is to be stored. Koz teaches each of segmented memory spaces of the storage unit stores and outputs a plurality of pieces of segmented expansion information

which form a first type of expansion information when the first type of expansion information is to be stored, and the segmented memory spaces of the storage unit are integrated to store and output a second type of expansion information when the second type of expansion information is to be stored (e.g. column 8, line 49- column 9, line 8). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Koz into the teaching of Yamamoto et al to output data continuously and improve the quality of the video/ audio for viewing.

Claim 7 is rejected for the same reasons as discussed in claim 1 above.

For claims 14 and 15, Yamamoto et al teach the first and second types of expansion information need not always be output at the same time ("need not always" does not mean the video and audio can't be output at the same time).

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 7,194,196 B2), in view of Shearer (US 6,296,187 B1) and further in view of Toida et al (US 7,292,610 B2).

For claim 16 and 17, Yamamoto et al teach teach an information playback apparatus comprising:

- a first acquisition unit configured to acquire contents from an information storage medium (e.g. figure 10, demultiplexer 86, which corresponds to the first acquisition unit, obtains video data,SV, from

the DVD1 and sends it to the video buffer 87, column 18, lines 57-65);

- a second acquisition unit configured to acquire expansion information from **at least one of** the information storage medium and an external apparatus via a communication line (e.g. figure 10, demultiplexer 86, which also corresponds to a second acquisition unit, obtains audio data, Sad, from the DVD1 and sends it to the audio buffer 92, column 19, lines 19-34);
- a storage unit configured to store the expansion information acquired by the second acquisition unit in accordance with a type of information (e.g. the audio buffer 92 corresponds to the storage unit and the "type information" corresponds to video, audio, and subpicture data, wherein these three type of data are separated by the demultiplexer 86 and stored in the video buffer 87, audio buffer 92 and subpicture buffer 89 accordingly); and
- a playback unit configured to play back the contents acquired by the first acquisition unit, and to play back the expansion information stored in the storage unit in synchronism with playback of the contents (e.g. column 19, lines 19-34, the video and audio data are synchronized and figure 10 is a DVD player as mentioned in column 17, line 40).

However, Yamamoto et al fail to teach the storage unit is a ring buffer, a start address and an end address of a storage area of the ring buffer are adjacent to each other, and when data are recorded in sequence in the ring buffer, oldest data in the ring buffer is overwritten by new data. Shearer teaches the storage unit is a ring buffer, a start address and an end address of a storage area of the ring buffer are adjacent to each other, and when data are recorded in sequence in the ring buffer, oldest data in the ring buffer is overwritten by new data (e.g. column 12, lines 3-16). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Shearer into the teaching of Yamamoto et al to overwrite the oldest data using the newest data for storage efficiency.

Yamamoto et al and Shearer fail to teach a playback unit causes a playback of the contents and the expansion information to pause when acquisition of the expansion information is delayed. Toida et al teach a playback unit causes a playback of the contents and the expansion information to pause when acquisition of the expansion information is delayed (e.g. column 20, lines 29-41 and figure 4, the decoding operation pauses or “stop decoding for some time” for the video and audio decoder 45-48). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Toida et al into the teaching of Yamamoto et al and Shearer for smoother reproduction (Toida et al, column 5, lines 31-36).

6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 7,194,196 B2) and Koz (US 5,990,955) as applied to claims 1, 7, 14 and 15, and further in view of Toida et al (US 7,292,610 B2).

For claims 18 and 19, Yamamoto et al and Koz fail to teach a playback unit causes a playback of the contents and the expansion information to pause when acquisition of the expansion information is delayed. Toida et al teach a playback unit causes a playback of the contents and the expansion information to pause when acquisition of the expansion information is delayed (e.g. column 20, lines 29-41 and figure 4, the decoding operation pauses or "stop decoding for some time" for the video and audio decoder 45-48). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Toida et al into the teaching of Yamamoto et al and Koz for smoother reproduction (Toida et al, column 5, lines 31-36).

Applicant's amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEG § 706.07 (a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing data of this action. In the event a first reply is filed within TWO MONTHS of the mailing data of this action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period. Then the shortened statutory period will expire on the data the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing data of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the data of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daquan Zhao

/Thai Tran/

Supervisory Patent Examiner, Art Unit 2621